AMERICAN ACADEMY OF FAMILY PHYSICIANS

Recommended Curriculum Guidelines for Family Medicine Residents

HIV Infection/AIDS

This document was endorsed by the American Academy of Family Physicians.

Introduction

Each family medicine residency program is responsible for its own curriculum. The AAFP Commission on Education's Subcommittee on Graduate Curriculum has created this guide as an outline for curriculum development, and it should be tailored to the needs of the program. Through a series of structured and/or longitudinal experiences, the curricula below will support the overall achievement of the core educational competencies defined by the Accreditation Council for Graduate Medical Education and provide guideposts to program requirements specific to family medicine. For updates and details, please refer to the ACGME website at www.acgme.org. Current AAFP Curriculum Guidelines may be found online at www.aafp.org/cg. These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies, as indicated on each guideline.

Preamble

The pandemic of human immunodeficiency virus infection is of vital concern to family physicians and the diverse populations they serve. The basic tenets of family medicine emphasize a compassionate, whole-person approach to patient care, applying specific knowledge and skills to a wide variety of diseases and a comprehensive and continuous commitment to patients and their families. Drawing on these core tenets, family physicians are well-suited to play an important role in the care of people living with HIV, from screening and prevention to HIV primary care and antiretroviral management. This is particularly true now, as the care of people living with HIV has evolved into a chronic disease model for the majority of patients. Family physicians should be knowledgeable about the multiple issues related to HIV patient care and develop skills to stay abreast of new developments.

These guidelines are intended to assist in the development of an HIV/AIDS curriculum for family medicine residencies. Because the knowledge base related to HIV/AIDS

changes rapidly, family physicians must also be aware of the resources available to maintain updated information and skills.

Patient Care

At the completion of residency, residents should be able to:

1. Identify patient risk factors for HIV infection by obtaining a thorough sexual health history and substance use history
2. Counsel patients at risk for acquiring HIV about behavioral risk reduction strategies and medication prophylaxis for primary prevention of HIV infection, including barrier methods and safer sex/injection practices
3. Identify and manage patients at risk for HIV infection using pre-exposure prophylaxis
4. Counsel all patients, even those not identified as being at risk for HIV, about the Centers for Disease Control and Prevention, U.S. Preventive Services Task Force and AAFP recommendations for one-time HIV screening for all adolescent and adult individuals and universal screening in pregnant patients
5. Complete post-test counseling, including diagnosis disclosure
6. Counsel patients living with HIV on the significance of “U=U,” which stands for “undetectable equals untransmittable,” and signifies that an undetectable viral load while on antiretroviral therapy means the virus is untransmittable to sexual partners
7. Understand the significance of “test and treat” or the rapid linkage to care/treatment and how it impacts long-term retention in care after diagnosis and the value of “same-day start” of a highly active antiretroviral therapy regimen, or ART, for appropriate patients
8. Recognize the signs and symptoms of acute HIV and know how to diagnose this clinical condition
9. Order and interpret HIV screening and confirmatory testing
10. Order and interpret baseline testing for newly diagnosed HIV patients
11. Create a treatment plan based on current collaborative governmental and non-governmental agency HIV care guidelines (i.e., U.S. Department of Health and Human Services and Infectious Diseases Society of America)
12. Monitor regimen effectiveness, side effects and toxicity
13. Understand how to define treatment failure or success
14. Know when and how to ask for help in changing the care plan after treatment failure, which may or may not include a different ART regimen
15. Assess adherence barriers and work with the patient and the care team to overcome these barriers
16. Understand when to start prophylaxis against common opportunistic infections and when to discontinue primary and secondary prophylactic therapy after immune recovery
17. Prevent, diagnose and treat sexually transmitted infections
18. Recognize life-threatening complications of HIV
19. Perform a comprehensive physical examination of a patient living with HIV

20. Investigate common symptoms of a patient living with HIV (e.g., fever, cough, diarrhea)
21. Manage common medication interactions between antiretrovirals and medications used in primary care/chronic disease management
22. Synthesize an appropriate management plan for conditions associated with HIV infection
23. Utilize and coordinate appropriate consultants and resources
24. Coordinate ambulatory, inpatient and long-term care
25. Counsel patients and significant others appropriately about testing and test results, therapeutic modalities and prognosis
26. Provide competent palliative/end-of-life care
27. Manage occupational and non-occupational HIV exposure per CDC and USPSTF guidelines
28. Be aware of the availability of treatments not approved by the U.S. Food and Drug Administration and clinical trial findings
29. Deliver preventive care, including health screenings and counseling, required for people living with HIV and understand how this may differ from recommendations for the general population

Medical Knowledge

Family medicine residents should demonstrate the ability to apply knowledge of the following:

1. Basic HIV virology and pathophysiology
2. Basic understanding of the epidemiology of HIV, including the local, regional, national and global prevalence and incidence, and the disproportionate impact on men who have sex with men, racial and ethnic minorities, adolescents, transgender women and people living in poverty in the U.S.
3. Modes of transmission, including sexual transmission, vertical transmission (intrauterine, intrapartum, postpartum, breastfeeding) and other occupational and non-occupational exposures
4. Signs and symptoms of acute HIV infection
5. Laboratory testing, including indications for and frequency of risk-based screening, indications for and frequency of non-risk-based (universal) screening and the CDC recommendations for a universal “opt-out” consent policy
6. Interpretation of HIV tests, including fourth-generation antigen/antibody serum tests, confirmatory HIV testing (HIV RNA polymerase chain reaction test) and rapid HIV tests
7. Basic understanding of HIV treatment, including the standard baseline and monitoring labs (e.g., baseline resistance testing, assessment of viral load and immune function), common side effects and drug interactions of each of the antiretroviral drug classes and when to initiate an ART regimen
8. Familiarity with preferred antiretroviral regimens per HHS guidelines (Note: selection of an ART regimen should be made by or in consultation with an HIV

specialist physician or other health care provider trained to manage HIV independently)
9. Manifestations of immune reconstitution syndrome
10. Basic understanding of AIDS, including the definition of AIDS, AIDS-defining infections, AIDS-defining malignancies and when opportunistic infection prophylaxis is indicated
11. Impact of co-infections, including other STIs (e.g., syphilis, gonorrhea, chlamydia, human papillomavirus hepatitis A and B) as well as hepatitis C
12. Role of chronic inflammation and impact of HIV as a chronic disease, including increased risk for a variety of malignancies, other health conditions and HIV-associated syndromes, including cardiovascular and kidney disease; bone problems, including osteoporosis; HIV-associated neurologic disease; HIV encephalopathy; HIV-associated dementia: HIV-associated nephropathy; anemia; leukopenia; immune thrombocytopenic purpura; pancytopenia; thrombotic thrombocytopenic purpura; HIV-wasting syndrome; hypogonadism; peripheral neuropathy; acute and chronic inflammatory demyelinating polyneuropathies; lipodystrophy; lipoatrophy; and metabolic syndrome
13. Role of the family physician in the HIV care team, including specific considerations when managing chronic disease (e.g., diabetes, chronic obstructive pulmonary disease, hypertension) in people living with HIV and familiarity with the HIV Medicine Association/Infectious Diseases Society of America primary care guidelines for people living with HIV (e.g., unique cancer screening guidelines, vaccine schedules)
14. HIV prevention strategies, such as HIV PrEP, post-exposure prophylaxis and non-occupational post-exposure prophylaxis
    a. Identification of at-risk patients
    b. Patient counseling
    c. Appropriate lab evaluation and monitoring
    d. Regimen selection
    e. Follow up
15. Treatment recommendations during pregnancy, peripartum and postpartum periods

Interpersonal Communication

At the completion of residency, residents should be able to:

1. Disclose an HIV diagnosis to patients and immediately link them to ongoing care
2. Communicate effectively with patients to ensure a clear understanding of their HIV diagnosis and the ensuing plan of care
3. Communicate with patients, their support persons and the public across a broad range of cultural and socioeconomic backgrounds
4. Participate in a multidisciplinary care team to address patient needs
5. Promote a safe environment where patients and others involved in their care can actively engage in their care decisions

6. Assist patients and others involved in their care in locating reputable medical information on the internet and other sources.
7. Discuss internet safety and protection of health information

Systems-Based Practice

At the completion of residency, residents should be able to:

1. Understand the role of public health surveillance in relation to HIV diagnoses and how diagnoses are reported to local and state health departments
2. Understand the role of partner notification, including the use of local departments of public health and CDC “partner services”
3. Collaborate with HIV- and non-HIV specialist consultants needed for the care of each patient
4. Be aware of the available funding for health care and medications, such as Ryan White title funding, which includes AIDS drug assistance programs and pharmaceutical patient assistance programs
5. Be aware of important legal considerations, including confidentiality of medical records (Health Insurance Portability and Accountability Act protections); disclosure of HIV status to third parties, such as employers or other health care professionals; and state laws regarding HIV disclosure
6. Be aware of the nonmedical determinants of treatment success, including the importance of safe and affirming care spaces, as well as the impact of stigma, substance use disorders, psychiatric comorbidities, housing stability, financial barriers and transportation barriers
7. Provide an ART regimen if sufficiently trained or in consultation with an HIV specialist
8. Interact with and assume leadership in medical, social and political communities
9. Recognize one’s practice limitations and seek consultation from other health care providers and resources as needed to provide optimal patient care to people living with HIV
10. Collaborate with community organizers/organizations to identify specific barriers and needs of the patient population
11. Coordinate medical and nonmedical services
12. Embrace the role of patient advocate
13. Recognize the importance of support from family members and others

Practice-Based Learning

At the completion of residency, residents should be able to:

1. Use online resources to obtain evidence-based HIV/AIDS treatment guidelines
2. Participate in the education of patients, families, support persons, students, residents and other health care professionals
3. Provide education about HIV in medical, social and other settings, such as middle schools, high schools, colleges, churches and other community agencies

Professionalism

At the completion of residency, residents should be able to:

1. Establish clinical rapport based on respect during the office visit
2. Create a safe and collaborative environment with the patient and the care team
3. Explain confidential services and circumstances in which this confidentiality may need to be breached
4. Understand the legal, ethical and social context of HIV and its impact on the care of communities
5. Understand the stigma, lack of knowledge and misinformation about HIV/AIDS that exist in the settings where they are working, including among health care professionals
6. Develop an awareness of their own attitudes and biases toward sexuality, injection drug use, cultural differences and communicable diseases
7. Develop compassion, objectivity and an understanding of the importance of quality-of-life issues when dealing with patients who have a chronic and potentially life-threatening illness
8. Recognize when specialist consultation is needed
9. Develop acceptance of the physician's continuing responsibility to support the patient and family throughout all stages of the illness
10. Set a positive example for other health care providers and the community by caring for patients who may be stigmatized
11. Develop an awareness of community and cultural attitudes toward HIV and the need for confidentiality and assistance with HIV disclosure when requested by the patient
12. Demonstrate awareness of implicit bias, particularly in relationship to race and ethnicity

Implementation

Within the capabilities of the residency program, implementing these curriculum guidelines is best achieved with supplementation from outside resources when necessary. Residents should have the basic knowledge and skills to care appropriately for their patients and serve as a community resource for information about HIV-related issues. Any training efforts must also strive to maintain an up-to-date curriculum that includes recent medical advances. The precise details of implementation may vary among residency programs, depending on interest levels, geographic location and the frequency of contact with people living with HIV.

Resources

Horberg M, Thompson M, Agwu A, et al. Primary care guidance for providers who care for persons with human immunodeficiency virus: 2024 update by the HIV Medicine

Association of the Infectious Diseases Society of America, Clin Infect Dis. 2024;ciae479.

Vivent Health and Test Positive Aware Network. www.tpan.com

TPAN. 2024 HIV drug guide. www.positivelyaware.com/2024-hiv-drug-guide

AIDS Education and Training Center. National Resource Center. www.aidsetc.org

American Academy of HIV Medicine. http://aahivm.org

HIV Medical Association. http://hivma.org

International Antiviral Society – USA. www.iasusa.org

National HIV Curriculum. www.hiv.uw.edu

National Institutes of Health HIV. https://hivinfo.nih.gov/

National Prevention Information Network. https://npin.cdc.gov/

POZ.com. HIV Medications Review. www.poz.com/basics/hiv-basics/hiv-medications

Stanford University. HIV Drug Resistance Database. https://hivdb.stanford.edu/

University of California, San Francisco. National Clinician Consultation Center. https://nccc.ucsf.edu/

University of Liverpool. HIV Drug Interaction Checker. https://hiv-druginteractions.org/checker

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